

AN - 1993-137113 [17]

A - [001] 014 03& 038 04- 040 143 144 157 175 195 289 308 310 381 541 544  
551 56& 560 566 567 573 575 59& 596 652 688 721

AP - JP19910233106 19910912; [Previous Publ. JP5070696 ] ; JP19910233106  
19910912

CPY - TOPP

DC - A23 A92 Q32

DR - 1278-U 1541-U

FS - CPI;GMPi

IC - B29B7/90 ; B29K105/16 ; B29L22/00 ; B65D1/09 ; C08K3/00 ; C08K5/00 ;  
C08L101/00 ; C08L101/16

KS - 0004 0218 0228 0231 1291 1840 1845 2211 2218 2606 2612 2628 2635 2654  
2774 2781 3142 3290

MC - A05-E02 A08-R01 A09-A A12-P06

PA - (TOPP ) TOPPAN PRINTING CO LTD

PN - JP3044857B2 B2 20000522 DW200029 C08L101/16 005pp  
- JP5070696 A 19930323 DW199317 C08L101/00 005pp

PR - JP19910233106 19910912

XA - C1993-061243

XIC - B29B-007/90 ; B29K-105/16 ; B29L-022/00 ; B65D-001/09 ; C08K-003/00 ;  
C08K-005/00 ; C08L-101/00 ; C08L-101/16

XP - N1993-104481

AB - J05070696 Plastic container is formed from a compsn. prepd. by adding  
10 to 40 wt.% of filler to biodegradable plastic. The filler is in  
particles having an ave. dia. below 20.0 micron.

- It includes calcium carbonate, hydrated magnesium silicate (talc),  
etc. The biodegradable plastic includes polyester such as copolymer of  
poly-3-hydroxybutyrate (3HB), poly-4-hydroxybutyrate (4HB), and  
polyhydroxyvalerate (PHV), aliphatic polymer such as polycaprolactone,  
polyglycolide such as polylactic acid, etc. and mixt. of two or more  
of these polymers. The container includes bottle, cup, etc.

- ADVANTAGE - The container has high elastic modulus and tensile  
strength, and improved biodegradability even when it has high wall  
thickness.

- In an example, a bottle made from a 880:20 mixt. of 3HB-3HV copolymer  
and talc having an ave. particle dia. of 10.0 microns was immersed in  
a soln. of enzyme refined from penicillium funiculosum IFO 6345 soln.  
for 24 hrs. and the bottle showed a loss in weight of 32%. Test piece  
made from the mixt. had a maximum stress of 1.47 kgf/mm<sup>2</sup> and an  
elastic modulus of 136.73 kgf/mm<sup>2</sup>. (Dwg.0/0)

IW - PLASTIC CONTAINER BOTTLE HIGH ELASTIC MODULUS TENSILE STRENGTH  
BIODEGRADABLE ADD FILL CALCIUM CARBONATE BELOW MICRON DIAMETER  
BIODEGRADABLE PLASTIC POLY HYDROXY BUTYRATE

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NC - 001

OPD - 1991-09-12

ORD - 1993-03-23

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TI - Plastic container e.g. bottl , with high elastic modulus,

tensile-strength and biodegradability - by adding filler .g. calcium carbonate, f below 20 microns dia. to biodegradable plastic e.g. poly-3-hydroxy butyrate